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ABSTRACT

This volume consists of three articles. "'Language and Society' in the B.A. Scheme," by L. M. O'Toole, is a revised version of some proposals for incorporating a "Language and Society" course in the second year of the B.A. program at the Language Centre. Ten propositions are offered as a basis for discussion. "Some Soviet Research in Computational Linguistics," by P.T. Culhane, summarizes the results of a questionnaire sent to Russian organizations involved in computational linguistics. The table provides the following information: (1) town; (2) team size; (3) use of word count; (4) use of computer; (5) language(s); and (6) chief field of research. "Semantics via Machine Translation" by P.T. Culhane discusses the search for semantic relationships in Soviet linguistics in the context of machine translation, and in particular the theory of "slovosochetaniye" (or word-combination), and Zholkovsky and Mel'chuk's study for a semantic dictionary. (AM)

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LANGUAGE IN SOCIETY

SEMANTICS

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"Language and Society" in the B.A. Scheme.

by L.M. O'Toole.

Introduction

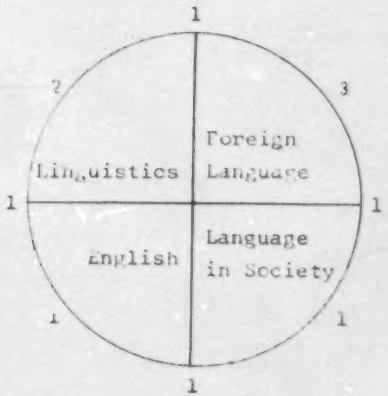
00. This paper is a revised version of some proposals put before the Language Centre B.A. Planning Committee at the University of Essex on 25th October, 1969. As discussion of many aspects of the proposals was necessarily limited on that occasion, several members have suggested that I should make them available in writing in order to allow a detailed consideration of their theoretical, methodological and pedagogical implications by all members of the Language Centre as well as by those who were represented on the B.A. Committee.

01. I would emphasise that this is in no way intended as a blueprint for a course. We have the opportunity to construct a new and exciting course, but it is still early for the engineers to move to their drawing-boards. These are merely first sketches by one of the design team who wishes to indicate some of the features he would like to see incorporated in the final model and is offering them for discussion.

02. A brief outline of the structure of our degree scheme as so far conceived might clarify the place and function of the "Language in Society" component in the Second Year as I see it.

2nd year	hours	3rd Year
1. Linguistics	4	1. Linguistics
2. Foreign Language	5	2. Foreign Language
a) Practical (3)		
b) Descriptive (2)		3. American English 2nd Foreign Language
3. English	5	
4. Language in Society	3	4. Sociolinguistic Project
5. Special Subject	(2)	5. Special Subject

(NB To lessen the risk of apoplexy among those who have to defend the scheme at Board meetings I should make clear that the first four components in the 2nd year interlock so that, for instance, one hour of the Linguistics component is shared with the descriptive study of the foreign language and one hour with English, leaving two hours for Linguistic theory. This means that the real total of "contact hours" per week is 13, including 2 for the Special subject, and not 17 as would appear from the above scheme. A diagram devised by Peter Wexler clarifies the relationship of the first four components: (hours for the "subjects proper" opposite the quadrants; shared hours at their intersections).



It is precisely the virtue of the proposals that follow that they make this degree of inter-relationship between the components both possible and, we hope, fruitful. A nice juxtaposition in the diagram puts "Language in Society" (which can only be a "performance" model) diametrically opposite the "Linguistics" (which, presumably, will refer to a "competence" model): (may students find the dialectic stimulating and insightful!)

03. The arguments below relate to ten propositions which were offered as a basis for discussion in the Committee. Each section begins with a proposition (underlined) and the numbering relates the supporting arguments and quotations to that proposition. I have also tried to make the bibliography easier to use by dividing it into similarly numbered sections and using an alphabetical ordering only within sections. Second references will refer back to the relevant section, e.g. "Pike (1964) op. cit. under 1".

1.0 Most forms of utterance above the level of sentence in spoken and written discourse are coherently and predictably structured.

1.1 In trying to establish some sort of theoretical basis for this course, I want to start by distinguishing clearly between "Language in Society" as a field of scientific research and "Language in Society" as a framework for part of an undergraduate course. This may save quite a lot of abortive disputation. I expect generative grammarians are right to insist that the study of linguistic competence can only be carried on scientifically within the confines of the sentence. The vehemence with which they reiterate this may hint at some residual doubts, but if the only respectable sort of linguistics is the one that puts its faith in a finite set of rules, we must recognise this point of view as a worthy starting-point for academic research.

1.2 Our B.A. students, however, are not going to be motivated only, or primarily, - or at all - by a passion for scientific rigour: they will want and expect to be helped to achieve a high

level of practical competence in a foreign language, to learn about the social and cultural soil from which the language springs; they will want to relate linguistic phenomena to the society and culture, to compare these relationships with analogous relationships between their native language and social and cultural features of its setting. Moreover, they will want, I think, not merely to study these phenomena and relationships passively, but to be helped in making them actively part of their own linguistic and social repertoire. Fishman (1968) distinguishes two types of foreign language learner; those with utilitarian motivation (the language seen as a vehicle for career advancement or scholarly or literary pursuits), and those with integrative motivation (who have strong cross-cultural sympathies and "behave as if they wanted to adopt not only the language, but the complete L_2 culture and all its behaviour patterns"). Although we must recognise that two specialist years in the Language Centre can only begin such a deep reintegrative process, I believe that most of the students who opt for our degree scheme will be of the second type. They will be deeply disappointed if we are unwilling to provide for their ideal.

1.3 One of the pedagogical implications of this commitment may be a sacrifice of scientific purity in so far as we must work with units of discourse beyond the sentence. As Jakobovits (1969) maintains with reference to transfer theory:

> In a pattern now familiar in the social sciences whereby scientific exactitude is inversely proportional to realistic concerns, we find that whatever specific knowledge there is on transfer concerns tasks and settings that are largely irrelevant to crucially important educational concerns, and the amount of specific and reliable knowledge on the latter is practically non-existent. (57)

1.4 It is not just a matter of training the students in "the four skills". We must aim at the range of competences outlined by Jakobovits later in the same article. He speaks of measuring the learner's knowledge of and behaviour in the second language relative to native speakers:

> (a) Mechanical Skills: these consist of standard proficiency and achievement tests within the four levels of skills: reading, writing, listening and speaking;
>
> (b) Semantic Sensitivity: these include judgements of acceptability of participial and adverbial phrases which measure the speaker's sensitivity to implicit, aspectual and metaphorical facets of meaning as well as semantic differential measures which compare the learner's evaluations with those given by native speakers;
>
> (c) Utterance Meaning: these are intended to assess the learner's understanding of the functional communicative

value of utterances, both in terms of the intended message they carry and the implications they allow about the speaker (his intentions, psychological state, social background, etc.)

(d) Communicative Competence: the purpose of these measures is to assess the learner's capacity to function in a communicative context through the medium of the second language. Various techniques are available with perhaps the "acting-out" method being the most versatile and simple and one which reveals the extent to which the learner has command over various "codes" that are differentially appropriate to particular sociological contexts;

(e) Cognitive Structure: the measures included under this heading are intended to reveal the extent to which the learner has incorporated the cognitive structure of the native speakers of the foreign language in so far as knowledge about one's culture is represented by lexical and semantic relations in language. Specifically, they are word-association structure, measures of semantic range and word categorization behaviour (83-4)

I have quoted Jakobovits at length here because he characterises so clearly the kind of competence the serious advanced L_2 learner should aim at. My contention is that while much of this knowledge and behaviour will be developed through the foreign language component of the degree scheme, certain aspects of what Jakobovits terms "utterance meaning", "communicative competence" and "cognitive structure" belong to a distinct field of study to whose theoretical status and methodological refinement we and our students may be able to contribute.

1.5 To round off the argument on my first proposition I could quote no one more eloquent than Pike whose major work (1964) is founded on the notion of a coherent and predictable structure underlying most types of discourse which must include units larger than the sentence:

> We are forced to insist that linguistic analysis must take as part of its essential domain the treatment of units larger than the sentence. Without these higher-level units there are not available distributional matrices for determining sentences themselves. A sentence is first of all a unit which occurs in a slot in a higher level structure - as part of a monologue, or as a total utterance, or as response in an utterance-response structure.
>
> Hierarchical structure does not stop with the sentence, nor begin with it. Rather it must begin with the total language event in a total cultural setting - which, in turn, is in a total physical setting. It is precisely this interlocking on higher and higher levels of integration that forces us to treat language as merely one phase of human behaviour and structurally integrated with it.

> For purposes of description and analysis the abstracting out of sentences is a legitimate and useful procedure.... but it is a deliberate distortion introduced in order to handle the data (484)
>
> It is only in reference to discourse structure, furthermore, that many important characteristics of sentence structure can be handled.

2.0 The language of utterances relates in a non-random, logically and psychologically determined way to social situations. The patterning of this relationship may be referred to as "codes" or "coding".

2.1 I will support this proposition with quotations from three distinguished sources because, as far as I know, their contentions have never seriously been contradicted (contentions though they are) and because real empirical support for this hypothesis can only come from analytical work which up to now has been largely random and spasmodic.

2.2 Malinowski was always quoted by Firth as the source of his term "context of situation" which has proved such a tantalising lodestar to the British linguists of the "neo-Firthian" school. A particularly clear statement of Malinowski's is to be found in his essay: "The Problem of Meaning in Primitive Languages" (1923):

> A statement, spoken in real life, is never detached from the situation in which it has been uttered. For each verbal statement by a human being has the aim and function of expressing some thought or feeling actual at that moment and in that situation, and necessary for some reason or other to be made known to another person or persons - in order either to serve purposes of common action, or to establish ties of purely social communion, or else to deliver the speaker of violent feelings or passions. Without some imperative stimulus of the moment, there can be no spoken statement. In each case, therefore, utterance and situation are bound up inextricably with each other and the context of the situation is indispensable for the understanding of words. (307)

2.3 The bravest attempts at analyzing the relationship between the language of utterances and their "context of situation" have been made by literary critics concerned with style. In his statement "Linguistics and Poetics" (1960) Jakobson is mainly concerned with the language of literature, yet he makes a point of stressing that non-literary discourse is also highly structured and relates to the situations in which it occurs:

> ... the question of relations between the word and the world concerns not only verbal art but actually all kinds of discourse. Linguistics is likely to explore all

possible problems of relation between discourse and the "universe of discourse": what of this universe is verbalized by a given discourse and how is it verbalized.

....The separation of the two fields of poetics and linguistics from each other is based on a current but erroneous interpretation of the contrast between the structure of poetry and other types of verbal structure: the latter are said to be opposed by their "casual", designless nature to the "non-casual", purposeful character of poetic language. In point of fact, any verbal behaviour is goal-directed, but the aims are different and the conformity of the means used to the effect aimed at is a problem that evermore preoccupies enquirers into the diverse kinds of verbal communication. (351)

....Insistence on keeping poetics apart from linguistics is warranted only when the field of linguistics appears to be illicitly restricted, for example, when the sentence is viewed by some linguists as the highest analyzable construction or when the scope of linguistics is confined to grammar alone or uniquely to non-semantic questions of external form or to the inventory of denotative devices with no reference to free variations."

2.4 Halliday makes a strong plea for a linguistic science which includes "performance" and relates language to its context in his paper "Clause types and structural function" (1969)

It is not necessary here to insist on the distinction between an idealized knowledge of a language and its actualized use: between 'competence' and 'performance', or 'the code' and 'the use of the code'. Such a distinction runs the risk of being either trivial or false: trivial if it is merely another name for what is described in the grammar versus what is not, and false otherwise. Nor need it be mentioned that the study of language in relation to its actual situations of use - the study of language as text - is devoid of theoretical significance. The behavioural, situational-textual study of language is concerned with types (including situation types) rather than tokens; nor is it less central to linguistics than, for example, a psycho-linguistic study of the kinds of structure human beings have in their brains. (3)

Later in the same paper Halliday provides a vivid example of the way the textual function of the clause affects the structure of a text as a message. He makes it clear that: "the basic unit of language in use is not a word or a sentence but a 'text'; and what we are here calling the 'textual' component in language is the set of options by means of which a language creates texts." (18)

3.0 Competence in recognising and using acceptable codes is not fundamentally different from and is acquired in the same way as linguistic competence.

3.1 For the moment this proposition must remain a hypothesis, though one which accords strongly with our intuitions about our automatic ability to use language appropriate to the social situation and speaker-hearer relationship we find ourselves in. A fundamental aim of the course I am proposing is to attempt to give substance to this hypothesis in a more systematic way than has been possible hitherto.

3.2 Work by Vygotski and Piaget substantiates one's own intuitions and observations of how children learn and practise codes in relation to contexts of situation. Firth (1937) describes very vividly what we all know to be true but have extreme difficulty in establishing scientifically.

> Every one of us starts life with the flesh and blood of his lineage and the two or three single roles of feeding, eliminating and sleeping. From the time we begin to be socially active at about two months old, we gradually accumulate social roles. We weave our second nature into flesh and blood as we are progressively incorporated into our social organization. The chief condition and means of that incorporation is conformity with various kinds of language behaviour. The main point here is the variety of language behaviour to be learnt, the ear and the eye languages to which the new member of society must react suitably, the apprenticeship of his tongue to a whole series of forms of speech bound up with his "set" or "sets", and the shaping of his hand to the making of the graven images of the tribe. (91)

Since it is hard to imagine Firth being attracted to the behaviourist position on language and code acquisition, a necessary consequence of his hypothesis would seem to be an innate "code acquisition device" as powerful as Chomsky's "language acquisition device": the CAD in us may be as strong as the LAD. Duncan (1968) talks more specifically of the child's internalization of roles:

> Very early in life we begin to play roles. Such roles are sometimes purely inner roles, as in the imaginary playmates children create, or the imitative roles in which the child copies those about him, as when he plays at being a mother, a father, a policeman, or a teacher. In playing such roles the child creates within himself the stimuli which call out the particular response or group of responses that go with such a role.... The child addresses himself as he would another, and thus learns to call out in himself the responses that actual address to others would call out in them. He takes such responses and organizes them into a role.... In such inner dialogue and role-taking the social self is born. As conversation with the imaginary other takes the form of dialogue, it becomes organized, and

in such organization we discover that there is a proper way - that is, an approved social way - to play storekeeper. As the play continues, we may even hear the child criticizing the self or the imaginary other for playing the role badly. (176)

3.3 Now all this is very fine in principle. Here are all these famous linguists and anthropologists talking about the existence of what I will group under the heading "discourse and interaction codes" in theory, but precious little systematic practical description of such codes has been attempted. All we have are the very entertaining examples selected for register or style contrast by Firth (1937), Joos (1962), Strevens (1964) and Halliday (1964) and Raymond Queneau's brilliant Exercices de Style (1947), but no theoretical or methodological framework. Hymes in his most useful article (1962) assures us that "an ethnographic semantics may be bulky, but it need not be on principle interminable, nor endlessly ad hoc. It should be more than a narrative reflection of reality. It should be a structural analysis, achieving the economics of the rules of a grammar in relation to a series of analyses of series of texts." But so far the most serious and thorough structural analysis has been of folk-lore texts by Propp (1928), Levi-Strauss (1955), Sebeok and Dundes, and of various types of short-story by the French structuralists like Barthes, Bremond, Genette and Todorov (1966) who, like O'Toole (1969), are attempting to build on the foundations laid by the Russian Formlists.

4.0 A useful means of discovering the rules of a code is to break them, thus revealing, for example, ambiguity, co-occurence restrictions, deviance or degrees of code-adherence.

4.1 So, in setting out to study with our students their L_1 and L_2 linguistic communities' codes, with the rules of the game still to be made up - or discovered - where are we to start? One proposal has been that, we should start by studying the bilingual as someone who "knows" and uses in varying proportions the language and social codes of two communities. The bridge-builder I had thought of was the comedian, whose skill consists in discovering, largely intuitively, the linguistic and other interaction codes of specific social situations in his own community in order to break them. And the more accurately he assimilates and reproduces the codes, magnifying certain features, of course, for presentational purposes, the greater the explosion of laughter when he suddenly bursts the bubble and switches codes.

4.2 Arkadii Raikin, the great Russian comedian, in a famous sketch, starts a lecture at a collective-farm workers' club on the harmfulness of home-distilled vodka ("samogon"). He uses all the cliches of agitprop code, but gets carried away by his enthusiasm, samples on behalf of his audience all the "disgusting" varieties and flavours of "samogon", and ends up rolling off the stage, still trying to get his tongue round the pompous polysyllables of officialese agitprop Russian. We laugh because we recognise

how well he knows the code which he breaks.

4.3 The reader may react by thinking: "O.K. So we'll keep the students entertained: that's something. But is the study of language in society to be endlessly and merely anecdotal?" Not merely, I think, because our clown is also a deeply serious figure; he shares a crucial quality with both the bilingual and our students: he is an <u>outsider</u>. Basically, he experiences some degree of alienation from the cultural community he lives in, but he has learned to live with and even artistically project this alienation. Similarly, the student of a second language (I mean the serious one who wants to live the language and make the alien culture his own - Fishman's "integrative motivation" -, not the utilitarian, who only wants to pick his way through a technical article), this student of a second language experiences a considerable degree of alienation towards both his L_1 and his L_2 as languages and cultures at various stages in the learning process.

4.4 Herman (1961) traces a developmental pattern in the use of a new language which I think we will all recognize, even though he studies it in the emotionally extreme form of the experience of an English-Jewish immigrant to Israel:

1. A period of "anticipatory socialization" (following lessons, radio broadcasts, etc.)

2. A period of over-conformity - dominance of the background is complimented and encouraged by native speakers of L_2; develops naive pride in L_2 proficiency and acculturation; exclusive commitment to L_2 spoken and written sources.

3. A period of vacillation - fluctuating potency of background and personal needs (his limitations are more apparent, more ready to revert to L_1.)

4. Retreat and withdrawal - dominance of personal needs (irritation at his own shortcomings in L_2; need to restore confidence through use of L_1).

5. Adjustment and integration - dominance of immediate situation (use of whichever language best suits the situation and its participants, i.e. near bilingualism).

Although the psychological symptoms in this pattern are largely linguistic in Herman's analysis, I have no doubt that the pattern relates equally to the L_2 student's process of acculturation to new codes.

4.5 Thus the student cannot help experiencing in relation to two cultures something akin to the alienation of the comedian; we can surely help him through the troughs and sloughs of his manic-depressive pilgrimage by making him realize that all serious language learners share his alienations and that he is not necessarily becoming unhinged - though it helps, temporarily. More than this, we can encourage him to capitalize on his alienation by selecting for code analysis those social-interaction

situations or modes of discourse whose codes he most feels like breaking. What is more, he may well analyse a number of such situations in his native language before he embarks on the linguistic sophistications entailed by a study of the L_2 situation.

4.6 Since the range of possible codes is almost infinite and we must start somewhere, I would suggest three "alienated" sources for texts and interaction situations to be analysed:

1. Those which comedians of the respective cultures are most prone to satirize, or feuilleton-writers to parody.

2. Those codes that the student himself feels the strongest urge to break.

3. Those situations which most reveal the underlying assumptions of those who write about an alien culture, e.g. the many recent English "interpretations" of the Russian scene; or, their equivalent, Everything Changes, Even in England (1965), in which a Pravda correspondent in London gives his rather jaundiced impressions of our society and culture: a charmingly aggressive book, probably written to punish England for depriving him of his Mother Russia for so many years, but crammed with clues about contrasting codes!

5.0 Defining the whole discourse or interaction situation involves the study of both factors and functions: i.e. working from the "whole text" down.

5.1 The need to look at situations or texts as whole units as well as analyzing their constituent elements involves a Gestalt approach like the one defined by Max Wertheimer in an address in 1924:

> The fundamental 'formula' of Gestalt theory might be expressed in this way: There are wholes, the behaviour of which is not determined by that of their individual elements, but where the part-processes are themselves determined by the intrinsic nature of the whole. It is the hope of Gestalt theory to determine the nature of such wholes.

The significance of this approach was emphasized by Ruth Benedict in 1934:

> The importance of the study of a whole configuration as over against the continued analysis of its parts is stressed in field after field of modern science.

6.0 But the code consists in relationships between smaller units within the discourse; i.e. work from constituent elements upwards.

6.1 The very word "analysis" clearly presupposes this approach, yet there are crucial theoretical difficulties in defining "the whole situation" and its constituent units and methodological difficulties in classifying and relating these. No one has made a braver attempt to solve these problems than Kenneth Pike whose

Language in Relation to a Unified Structure of Human Behaviour (1964) is a magnificent tour de force. And yet the colossal taxonomies he balances on the frail point of a phoneme lead him ultimately, I think, to pseudo-procedures. But still Pike's book is full of seminal ideas that we cannot afford to ignore. His distinction between "etic" and "emic" units of meaning and logical structure (by analogy with phonetic and phonemic units of sound structure) allows us to keep separate the logical categories of systems, classes and units in general and the specific units within a system which are defined relative to that system. Moreover Pike's trimodal analysis of emic units (according to feature mode, manifestation mode and distribution mode) could help us greatly in the "natural history stage" of our enquiry when great care must be taken to collect the right data for eventual classification.

7.0 Certain schools of linguistics, social psychology and literary criticism appear to be converging in a way that begins to make work from Propositions 5 and 6 possible.

7.1 It will not be possible in a short article to argue all the strands of thought underlying Propositions 5 and 6, particularly where one is aiming at a design sketch rather than a blue-print, so I will merely point to some tendencies in linguistics, social psychology and literary criticism which I think could help us in evolving a methodology, or which, for the first two or three years of the Degree Course, we could try out in turn to test their productiveness.

7.2 Jakobson and Hymes have attempted to isolate the factors and functions of the speech situation and to relate them. Jakobson (1960) isolates six factors whose relationship he represents in the following diagram:

CONTEXT

ADDRESSER — MESSAGE — ADDRESSEE

CONTACT

CODE

(The addresser sends a message to the addressee. To be operative the message requires a context referred to, seizable by the addressee and capable of being verbalized; a code fully or partially common to the addresser and addressee; and a contact -

a physical channel and psychological connection between addresser and addressee, enabling both of them to enter and stay in communication.) (356)

Jakobson relates to these factors a series of Functions (which he also refers to as "set" or "Einstellung"):

1. Emotive or "expressive, focused on the addresser, aims at the direct expression of the speaker's attitude towards what he is speaking about.

2. Conative, orientation towards the addressee.

3. Referential, orientation towards the context.

4. Poetic, orientation towards the message as such (a definition, perhaps, of the Prague School notion of "foregrounding" in verbal art)

5. Phatic, confirming or renewing contact, physical or psychological.

6. Metalingual, focusing on the code.

In part, of course, this is an elaboration of Ogden and Richards' The Meaning of Meaning, but it owes most to the thinking of the Prague School with whom Jakobson worked in the 1930's.

7.3 Dell Hymes (1962), in what I would regard as another item in a basic reading list for the Language and Society course, improves on Jakobson's model, finding seven Factors in the speech event:

1. Sender. 2. Receiver. 3. Message form. 4. Channel 5. Code. 6. Topic, and 7. Setting

He also goes further towards defining the Speech Event itself and indicating how we may identify the factors. He lists seven Functions, but sees their relationship to the Factors as being much more complex than the one-to-one correlation proposed by Jakobson.

7.4 Firth (1935) touches on the same problems, as does the work of some of his followers on "Register", summarized by Ellis and Ure (1969). The register model, as developed so far, however, appears to depend largely on constituent factors for defining the speech situation and leaves the functions out of account. Such a mechanistic definition of a complex human activity appears to leave out all but the most obvious underlying assumptions of the speech event Lyons (1966) raises more sophisticated questions on meaning, but is not primarily

concerned with defining the speech event. The fullest and most interesting treatment of language functions that I have come across is in Halliday's recent (1969) paper entitled "Clause types and structural function". Here the "sender's" underlying (but describable) intentions are related systematically, indeed systemically, to the linguistic data: four types of textual function: ideational, interpersonal, textual and logical are related in a most revealing way to grammatical categories within the sentence. This article, together with those of Jakobson (1960) and Hymes (1962) which I have already mentioned would make an excellent starting-point for our own discussions in planning this course and for our students' consideration of the problems of code analyis and classification.

7.5 There is a branch of Social Psycholgy which seems to me to be converging in a most opportune way with the linguistic approaches I have mentioned, although I know of no attempts to relate the two disciplines as yet. My reading in this field is limited, but the following writers have made attempts to define interaction situations according to objective criteria:

Watson and Potter (1962) think of the central participants in each episode (in this case in a sociable setting) as "constituting an axis, intending by this term to indicate that two or more persons, for the duration of the episode, join together to create a single system". (248) They then establish a set of categories which define axis type in terms of whether the main intention is "presenting" or "sharing". Their illustrations of an episode using these axis types succeeds as an analysis of the factors and functions which structure one type of discourse "text" beyond sentence level.

Goffman (1969a and 1969b) has adopted a dramatistic model for analyzing roles in human interaction which lays bare most effectively the intentions of participants, the relation between actor(s) and audience, exploitation of setting and the conventions of the "genre" which both actors and spectators constantly subscribe to.

McHugh (1968) and his colleague Garfinkel (1967) set out to discover "codes", or rules of social intercourse, by breaking them. This has been an interesting and quite fruitful approach which may account for the prominence of sociology students in campus revolts: they were only trying to find what the rules were! Duncan (1962) and (1968) extends the symbolic interaction approach to the study of what he considers the basic institutions of a society, while focusing in his analyses on the individual act. A quotation from his Symbols in Society (1968) will make clear how he proposes to work:

> Our concerns here are with the structure and function of the act considered as dramatic in form and social in content. The form of the act consists of five elements, namely, the stage (situation) or environment) on which the act takes place, the kind of act it is (its social function), the roles involved in the action, the ways in which communication occurs within the act, and the kind of social order which is invoked as the purpose of the act. The content of the act exists in social interests as these are expressed in the basic institutions of society. Eleven such contents of social experience are distinguished. These are (1) the family; (2) ruling, being ruled and reaching common agreement, as in political modes of action; (3) economics, or the provision of goods and services; (4) defence, or the means ranging from force to the apologetics and propaganda we use to defend ourselves from enemies within and without the community; (5) education, or the creation and transmission of culture; (6) sociability, or the purely social forms we use to court each other as superiors, inferiors and equals; (7) play, games, entertainments and festivals, in which we learn to act together under rules, and enjoy, so that our social bonds will be strengthened in the euphoria of "togetherness"; (8) health and welfare; (9) religion; (10) art; and (11) science. (16)

If this division of the world into such large-scale categories seems as crude as that attempted by Hall in his famous The Silent Language (1959), Duncan nevertheless applies his five functions in the analysis of particular "acts" with great subtlety. The missing dimension in the work of all these "symbolic interactionists" is the linguistic one. If only, one feels, they had been able to relate specific categories and functions to specific grammatical patterns and lexical choices, at least some of our "codes" would have been mapped.

7.6 The work of the symbolic interactionists", who follow the dramaturgical approaches initiated by G.H. Mead and Kenneth Burke, relates in an interesting way to that of the French "semiology" school. In a collection of essays published in Communications (1966 and 1968) Roland Barthes, Julia Kristeva, Claude Bremond, Tzvetan Todorov and others apply a theory of structured signs primarily to literary analysis (of the short story in particular), but also to some non-literary texts and interaction situations, They trace their ancestry back through Jakobson, the literary "structuralists" of the Prague School and the Russian Formalists of the 1920's.

7.7 If Jakobson and Burke stand astride the Atlantic like twin Colossi of poetics, linguistics and symbolic action, Levi-Strauss strides out to meet them with his structural anthropology. His work on the structural study of myth (in the article of that name, 1955, 1960, and 1961) and his provocative review of the American translation of the Russian Formalist, Propp's Morphology of the Folk-tale (1958), have inspired many French literary analysts and American anthropologists and folklorists to produce some excellent examples of a type of discourse analysis which may influence our own thinking. If "structuralism" has become a rude word in linguistics, it still has both insights and a methodology to offer in some other human sciences.

8.0 The "Language in Society" course in our B.A. would provide a good opportunity for initiating the systematic study of discourse codes. Conversely, such study would be the most meaningful interpretation of the notion "Language in Society" for students who are simultaneously studying L_1, an L_2 and linguistics, but who are not professional linguists.

9.0 A stimulating and instructive variety of exercises in using and contrasting L_1 and L_2 may be built up from attempts to test the acceptability of codes "cracked" during the course.

9.1 Suppose that we allot three "contact hours" each week to the Language in Society course during the second year of the B.A. (bearing in mind the interlocking with the English and Foreign Language components envisaged in 0.2), how would we divide up this time?

A possible way would be as follows:

A. 1 hour: theory: lectures and discussion of set-reading along some of the lines I have suggested.

B. 1 hour: analysis (L_1): intensive collective analysis of English discourse or interaction texts (which students would also be expected to attempt on their own, as we evolve the tools).

C. 1 hour: analysis (L_2): intensive collective analysis of foreign-language texts, possibly chosen for deliberate (intuitively!) code contrast with the English texts. This work could - and perhaps would, inevitably - spill over into the "practical language" component. It would probably require the participation of both English and L_2 native-speaker teachers.

9.2 Most of the work our students do in this course will clearly be analytical, using and refining their receptive reading skills. But it may be that these skills could be sharpened through practical writing exercisesdesigned to highlight the details of code contrasts. In contrasting codes within one language, various types of paraphrase and rewriting exercises will be appropriate, involving syntactic manipulation, simplification or complication, lexical substitution, etc. The most ambitious scheme for exercises of this type is offered by Pike in a little-known paper (1964) who starts from the belief "that the careful analysis of the rhetoric of a paragraph implies an analysis of the thought structure underlying it". (83) Using the central concepts of his linguistic theory and regarding units in their "feature mode", "manifestation mode" and "distribution mode", he sets out to show, with detailed plans for exercises, that "by isolating" one component of a problem and building it into an artificial languagette for analysis, an extremely complex total problem can be tackled piecemeal.

9.3 For contrasting codes between L_1 and L_2 within the same discourse type or interaction situation, translation is obviously one of the most revealing exercises, although it should be structured into the course, rather than merely added on as a useful (and familiar) exercise. In addition, several of the exercises suggested by Pike could prove very useful in the foreign language.

10.0 The virtues of the approach I have outlined, as I see it, are:

1. By discussion and testing of the several theories of "context of situation", "functions of discourse", "defining the utterance or situation" and "structural analysis" ("structural"in the Prague sense, not Bloomfield's), we will be trying to evolve and, perhaps more important, <u>apply</u> a viable theory and method.

2. A course of this kind will provide a bridge between the theoretical rigour of the Linguistics component and the practical work of the Foreign Language component.

3. The student will not merely be studying what other people have said about codes and language varieties: he will be doing creative academic work himself, learning from his own "code competence" in English and the intuitions he is developing about the foreign language and the community that uses it.

4. It will relate so closely to the student's own experiences of society and of the language-learning situation, involving the interplay of objective criteria and personal intuitions, that students will enjoy it, I think.

5. In so far as it involves contrastive study of comparable L_1 and L_2 codes, it constitutes a valuable area for research and learning in a School of Comparative Studies.

(January, 1970)

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	Town	Size of team*	If word-count	If using computer	Language/s	Comment
1.	Moscow	4	x	✓	E-R	Data processing
2.	Moscow	11	x	✓	AmE	Data processing
3.	Moscow	8	✓	✓	G	Socio-political
4.	Moscow	2	x	✓	G	Information retrieval
5.	Moscow	1	x	✓	var.	Average lengths of words
6.	Moscow	1	✓	✓	R	Morphs
7.	Leningrad	3	✓	✓	R	Large general frequency list
8.	Kishinev	C	6	x	G	Electronics
9.	Minsk	C	9	✓	var.	Various disciplines
10.	Minsk	C	2	x	R	Language of computer technology
11.	Minsk	C	✓	x	E	Building materials
12.	Dagestan	31	6	✓	Rum	Various disciplines
13.	Chimkent	3	✓	x	R	Electronics
14.	Chimkent	3	✓	x	E	Physical chemistry
15.	Chimkent	2	✓	x	K	Press
16.	Chimkent	1	✓	x	R	Abai (poet)
17.	Chimkent	3	✓	x	R	Electronics
18.	Chimkent	3	✓	x	G	Physical chemistry
19.	Chimkent	3	✓	x	R	Electronics
20.	Gorky	4	✓	✓	R	Lenin
21.	Gorky	C	✓	✓	U	Also various grammatical counts
22.	Kiev	2	x	✓	Old R Pol & U	Statistics of length of words (in phonemes and letters/ syllables)
23.	Kharkov	2	x	x	R	Style
24.	Kharkov	1	x	x	E	Grammar of English Sp.

*C=Collective

25.	Kharkov	1	x	x		R	Medical texts
26.	Riga	9	✓	✓		L	General
27.	Riga	12	x	x		L	'Literary' language
28.	Riga	2	✓	x		L	Press
29.	Vilnius	3	✓	x		R	Paustovsky
30.	Kiev	15	✓	?		U	+ Statistical analysis
31.	Alma-Ata	2	✓	x		R	Backwards dictionar
32.	Samarkand	52	✓	x	V	SL*	Abbreviations in slavonic languages
33.	Samarkand	1	✓	x		R	'Virgin Soil Upturned'
34.	Erevan	6	✓	x		R	Concordance of math. literature
35.	Tbilisi	7	x	?		G	Structural depend. of elements
36.	Perm	1	✓	x		R	Mamin-Siberyak
37.	Kiev	7	✓	x		F	Electronics
38.	Kiev	3	✓	✓		R	Language of space research
39.	Ivanovo	6	✓	x		F	Newspaper language
40.	Novosibirsk	1	✓	x		R	Children's speech
41.	Dnepropetrovsk	2	✓	x		G	Surgery
42.	Magnitogorsk	7	✓	✓		E	Metallurgy
43.	Chelyabinsk	14	8	✓	E	& G	Word-combinations
44.	Moscow	1	3	x		R	Concordances: Tyutchev, Pasternak, Rimbaud.
45.	Gorky	8	x	✓		R	Characteristics of style
46.	Leningrad	10	✓	x		R	Language of linguistics
47.	Leningrad	12	✓	x		R	Physics texts
48.	Leningrad	5	✓	x		R	Political economy

* V SL = Various Slavonic

Note 1

The information summarised in the above originally appeared in Труды ШНИИПИ Вып I, Москва 1967.

Note 2

Further information about these projects is available in Essex and the author of this note would be glad to answer specific questions.

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(January, 1970)

SEMANTICS VIA MACHINE TRANSLATION

P. T. Culhane.

The problem of slovosochetaniye (word-combination), sometimes rather loosely translated as 'collocation' or 'syntagma', has long been the object of study for Soviet linguists, and recent experiments in machine translation have given the semantic elements of slovosochetaniye somewhat more objective criteria.[1]

The idea of 'slovosochetaniye' should not be confused with the idea of 'collocation' as defined in 'Scale and Category' terms. There are however certain points of contact which should not be overlooked and there is no reason why each of the theories should not benefit from contact with the other. Firth's statement about collocation that it is part of the meaning of item A that it collocates with item B[2] would find few opponents among Russian linguists. The 'Scale and Category' definition of 'collocation' might be disputed by Russians on the grounds that no semantic or grammatical condition is necessary for its existence, but co-occurrences would form a central part of the discussion of the meanings of lexical items both here and in the Soviet Union.

The theory of slovosochetaniye has the basic assumption that there exists a unit of syntax which is longer than one lexical item, such that within this unit there is a grammatical relationship between the items.[3] The application of the theory to language has interesting variants. One can concentrate on the grammatical relationships and concoct prescriptions about how the language should be used,

or one can use the devices of slovosochetaniye in order to observe changes in language. To some Soviet linguists the most important information to be derived from slovosochetaniye is concerned with whether or not a word can or cannot co-occur with another in a given grammatical structure. To others, it is a device for recognising the different stylistic properties of language and a unit which reflects the changes in language much more effectively than does the sentence. The reason for this latter conviction is that the unit of slovosochetaniye changes much more rapidly than does the sentence-unit.

Every combination of the kind defined above is a 'slovosochetaniye' and it will readily be understood that there are many classes of combination. Slovosochetaniye however, is not a complete linguistic model, since it fails to account for single-word utterances.

It is necessary to point out also that slovosochetaniye is not merely the study of set expressions. The latter merely constitute one class of combination, namely the 'fixed' combination (ustoychivoye slovosochetaniye). The word-combinations can be looked at from various aspects, e.g. "he is reading a book" - 'book' can be considered as the direct object of the sentence, but can also be considered as something which may be read, and would fall into the same category as newspaper, journal, etc. If we substitute something which may not be read as the direct object of the sentence, the sentence becomes nonsensical. If we take away 'book' and add something like 'thermometer' we know a little more about the meaning of the word 'read'. If we take another example of a similar grammatical structure 'he sang a song' we

have the same two types of relationship between V & N, but in the second case the semantic relationship is slightly different in that an action is being performed which produces something which is typically produced when the action takes place, whereas in the example 'he read a book' an action is being performed on an object which is typically the object of such an action, but in this case in order to obtain something from the object. So here we have two distinguishable types of semantic category, with an identical grammatical construction V, Na. The semantic similarity of such sentences as 'The man started his car' and 'The man stopped his car' will be readily apparent. 'Started' and 'stopped' are antonyms. But the relationship between 'started' and 'stopped' is not of the same semantic level as the relationship between 'started' and 'car', 'read' and 'book', etc. and must be treated as of a different order. Generalisations may be made about the types of semantic relationship.

The search for these semantic relationships is one which has occupied some soviet linguists in their attempt to devise a semantic synthesis for the construction of a 'basic' language for machine translation, and substantial efforts have been made to categorise the basic functions of language on a semantic level. With extensive research already in progress on word-combination, it was inevitable that the work of these linguists should have a 'backwash' effect on the already existing theories, and that views of word-combinations should become more objective.

In order to formulate a 'basic' language it is necessary to consider the nature of natural language. Here

the concept of 'deep lexis' is important. Deep lexis concerns the basic relationship between lexical items in context and exists at the level where there is no difference between the following examples: 'The author wrote the book' and 'The book was written by the author' and 'The author's writing of the book'. In every case the real-world relationship is the same between the author, the book and the action. An action is being performed by a person, which is causing a result expressed in the form of a noun. The manner in which the action is being performed and the nature of the participants are not mentioned. If they were mentioned (e.g. the talented author wrote his first book very quickly) they do not change the nature of the sentence, but only modify certain parts of it. There is a certain 'pressure' in the sentence which is being exerted by one element in order to produce another element. This 'pressure' relationship and the relationship of 'state' between noun and verb are basic to language and are of a more fundamental nature than the relationship between noun and adjective or between verb and adverb. That there are different types of 'pressure' and 'state' relationships is also beyound doubt. If these relationships existing between noun and verb could be categorised we would know much more about the nature of language and the nature of semantics at this 'deep' level. The number of possible types of different lexico-grammatical relationships between verb and any other class of words greatly exceeds the number of possible types of relationship between nouns and other classes. The number of possible types of 'noun •' combinations exceeds the number of adjectival combinations etc. This might seem to

indicate that verbs are more 'lexical' than nouns but this could perhaps be refuted by saying that we are here discussing lexico- grammatical combinations, and that it is at the grammatical level that the verb obtains much of its 'combinability'. Verbs also, perhaps, have a greater tendency towards homonymity.

Zholkovsky and Mel'chuk have made an interesting study in order to obtain a semantic synthesis for the purposes of constructing a 'semantic dictionary' for machine translation.[1a] Under the general heading of 'Lexical function' (p.198) there are two subheadings 'Substitution of Equivalents' and 'Semantic Parameters'. It would be useful to summarise the contents of these two sub-sections of the article. I shall substitute English examples for the original Russian ones. The symbol kw stands for a key word.

I. Substitution of Equivalents. (i.e. words which can be used in place of the key word)

1. Syn. - synonym
   kw - syn (kw)
   U.S.S.R. - Soviet Union
   Chef - cook
   etc.

2. Conv. - Converse
   kw - Conv.
   to fear - to frighten
   to buy - to be sold (e.g. a book by..)

3. Der. - Derivative
A word which corresponds to kw in sense, but which differs from it in syntactic status. Subclasses (a) Der_V, (b) Der_S (noun), (c) Der_A, (d) $Der_{Adv.}$, may be further sub-divided.

II. Semantic Parameters (used in conjunction with the key word)

1. Copul + kw (joining, to be)

kw	Copul (kw)
fresh	- to be
example	- to be/to serve as
teacher	- to be/to work as

2. $Incep_1$ + kw to begin

kw	$Incep_1$ (kw)
war	- to break out
wind	- to blow up

$Incep_2$ + kw when kw is a verb

kw	$Incep_2$ (kw)
to sleep	- to fall asleep
to journey	- to depart

3. Fin_1 + kw to finish (when kw = noun)

kw	Fin_1 (kw)
fire	- to go out
illness	- to be cured

Fin_2 + kw (when kw = verb)

kw	Fin_2 (kw)
to remember	- to forget
to sleep	- to wake

4. Caus. + kw to cause to do something so that something will happen

kw	Caus (kw)
picture	- to paint/to take
meeting	- to call
to agree	- to persuade

5. Liqu. + kw (to liquidate, to cause to disappear)

kw	liqu (kw)
meeting	- to close (to declare closed)
to sleep	- to rouse
illusion	- to shatter

6. $Oper_1$ + kw (action which is performed in connection with a noun (kw) because of the nature of the noun itself)

kw	$Oper_1$
chair	- to sit on
clothes	- to wear
rôle	- to play
power	- to have/to wield

7. $Oper_2$ + kw (the typical relationship which exists between the object and the key word)

kw	$Oper_2$
power	- to be under
interest	- to be the subject of/to arouse
support	- to find

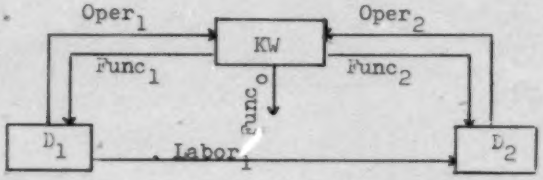
8. $Func_0$ kw (typical action of the subject)

kw	$Func_0$ (kw)
wind	- to blow
engine	- to go [to work]
gun	- to fire
'plane	- to fly
river	- to flow

9. $Func_1$ kw (typical action of kw when kw is subject. Basic fulfilment)
   kw $Func_1$
   feature - to be present

10. $Func_2$ kw (typical action of kw attracted by the object of the situation)

In order to clarify the parameters suggested in the categories 6 - 10 the authors suggest the following scheme.



D_1 = subject of the action
D_2 = object of the action.

11. Labor kw (to 'work' with the help of kw)
    kw
    brackets - to put (something) in
    arrest - to put under
    example - to illustrate with

12. Fact kw (to become a fact, to be realised)

13. Real kw (to realise, to fulfil a need)

14. S_1 kw (typical name of a subject in the situation of kw) to impede - obstacle

15. S_2 kw (typical object)
    to serve - a customer
    to cure - a patient, etc.

16. A_1 (typical description of the subject)
    to harm - harmful
    to like - pleasant

17. A_2 (typical description of the object of the situation of kw according to its rôle in that situation).
    to know - well-known
    to love - beloved

18. Loc kw (place, typical location). This category includes expressions of time and abstract expressions.

19. Magn kw (to a great extent, very)

20. Anti (antonym)

21. Gener kw (Generic term including kw in its category)

22. Ver kw (true, correct, according to its intention)

23. Son kw (typical sound given out by kw)

24. Prepar kw (to prepare to get ready for use)

The above parameters do not, as the authors confess, constitute an exhaustive list. The authors suggest 'Mult', 'Sing.', 'Bon', 'Degrad' as further 'candidates', and no doubt other categories will be proposed. 'Taking part in' and 'Intensification of action' are two other parameters which have already been suggested. The thought that there might be a limit to the number of possible parameters is a

particularly tantalising one. If only a limited number of parameters does exist then we shall have a much more well-defined tool for the analysis of semantic components than has hitherto been the case.

It is important, in discussing meaning, to be quite clear as to the level of language and the type of meaning (denotative, pragmatic, intonational, etc.). The inclusion of more than one type of meaning into an analysis can create havoc. The above remarks and the parameters discussed are best applied at the level of word-combination and the meaning discussed of a neutral 'functional' nature. The relationships discussed occur in 'deep lexis' and are reflected within the limits of the parameters in surface lexis. They do not take into account, therefore, such features as intonation nor are they mainly concerned with the differences within 'function' of language, e.g.

1.	sing play	song aria tune ditty	singer tenor etc. - player
2.	read	book volume tome etc.	reader
3.	write compile	writing (Deriv.) book, etc.	writer author compiler

The authors' theory seems to apply mainly to the horizontal axis of the above three examples. It is

difficult to fit words such as 'cat' and 'dog' into any part of the system they suggest. Nor is there any distinction made, for example, between such words as 'speaker' and 'spokesman'. The 'egocentricity' of words such as 'here' and 'now' is also not defined. The 'arch-lexeme' quality of derivative S_1 and S_2 forms is something which might bear investigation. These remarks are not intended as a criticism of the article since it is clear that the scope of the synthesis is strictly limited by its authors. The article represents a significant step forward in linguistic theory and provides the theory of 'word-combination' in the Russian sense with a 'linguistic respectability' it did not previously hold.

In one or two cases the authors make rather obscure distinctions. It is not absolutely clear what the difference is between parameters 8 and 9, and why any distinction is necessary between these two. There are also one or two examples of parameters which might be candidates for the 'Substitution of Equivalents' category, and these are 'Anti' and 'Gener'. There are obvious arguments for keeping them as parameters, as they do not substitute without being treated in some way, e.g. Anti - neg. might be substituted, whereas Anti might not.

Nevertheless, a strong attraction exists between 'Anti' and 'Syn', and it is difficult to justify making 'Anti' a parameter along with 'Copul', 'Incep' and the rest. Nor is it easy to see why 'Der' occurs in the category of 'equivalents' and 'Gener' does not. Perhaps the answer to this is to include only 'Syn' and 'Conv' as 'substitution' items and to make Der a parameter. A

case could even be made out for a third category in which 'Anti', 'Der', 'Gener' and perhaps others could live happily together.

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